

El Salvador - Northern Transnational Highway

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Overview

Identification

COUNTRY

El Salvador

EVALUATION TITLE

Northern Transnational Highway

TRANSLATED TITLE

Carretera Longitudinal del Norte

EVALUATION TYPE

Independent Impact Evaluation

ID NUMBER

ddi-mcc-slv-socialimpact-connectivity-2014-v1

Version

VERSION DESCRIPTION

Raw data for internal use only

Overview

ABSTRACT

The benefits of the connectivity project will be measured using a rigorous impact evaluation methodology. An impact evaluation is a study that measures changes in outcomes affecting wellbeing that can be attributed to a specific intervention. Impact evaluations require a credible and rigorously defined counterfactual that estimates what would have happened to the beneficiaries in the absence of the project. Estimated impacts, when contrasted with total related costs, provide an assessment of the intervention's cost effectiveness.

It is expected that this project will reduce transportation costs and enable households to extend their labor activities and diversify their income sources. The first questions are related to the project outputs (direct products of the program, such as segments of the NTH constructed, etc.) as opposed to outcomes or impacts (changes access to markets, changes in income).

Some questions that will be addressed in the impact evaluation:

- Was the NTH implemented according to plan?
- Did the NTH reach the originally intended beneficiaries? Did it reach unintended population or sectors of the economy?
- Does access to the improved NTH improve market participation by increasing the likelihood of going to the market and/or the volume sold in the market?
- Does access to the improved NTH increase income from agricultural sources?
- Does access to the improved NTH increase the availability of non-farm employment and promote the creation of non-farm enterprises?
- Does access to the improved NTH increase the use of public services? Specifically, health and education services?

EVALUATION METHODOLOGY

Regression Discontinuity Design, Continuous Treatment

UNITS OF ANALYSIS

Households

KIND OF DATA

Sample survey data [ssd]

TOPICS

Topic	Vocabulary	URI
Transport	MCC Sector	
Gender		

KEYWORDS

Roads, Transport, Impact evaluation, Continuous treatment, Regression discontinuity

Coverage

GEOGRAPHIC COVERAGE

The connectivity project initially consisted of a network of connecting roads (NCR) and the Northern Transnational Highway but because of the significant increase in construction costs and the existence of other interventions in connecting roads the project only focused on the Northern Transnational Highway. As a result of these changes the current impact evaluation design focuses only on the evaluation of the Northern Transnational Highway.

UNIVERSE

The population being analyzed consists of the people living within a 30 minute radius of the NTH. This region (the Northern Zone) contains one-half of El Salvador's poorest municipalities and suffered more damage from the country's internal conflict during the 1980s than any other region. Economic and social indicators in the Northern Zone are currently worse than the national averages.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Social Impact Inc.	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Millennium Challenge Corporation	MCC		Metadata Production

DATE OF METADATA PRODUCTION

2014-12-17

DDI DOCUMENT VERSION

Version 1.0 (December 2014)

Version 1.1 (January 2015) : Description of main outcomes, other.

DDI DOCUMENT ID

ddi-mcc-slv-socialimpact-connectivity-2014-v1

MCC Compact and Program

COMPACT OR THRESHOLD

El Salvador

PROGRAM

The connectivity project consisted of one main activity – the rehabilitation and improvement of the Northern Transnational Highway (NTH), a vital transport artery that runs throughout the region as well as into neighboring Honduras and Guatemala. The goal of the NTH is to increase the Northern Zone’s access to and connection with markets and the larger regional and national economy.

MCC SECTOR

Transport (Trans)

PROGRAM LOGIC

The overall logic of the Compact was to improve the lives of Salvadorans in the Northern Zone. As such, the Compact combined infrastructure development with technical assistance aimed at connecting northern El Salvador with the rest of the country, helping to create opportunities for the region’s residents through increased access to markets through the east-west highway, increased access to electricity through expansions of the electrical grid and distribution of solar panels, increased access to water and sanitation facilities to decrease disease in the region, and other interventions in education, agriculture, and other productive activities. The road improvements are expected to affect the livelihood of the poor in the area. First, through the income-market access pathway, increases in access through lower times and lower cost of moving products to existing markets, are expected to promote agricultural productivity and participation in non-agricultural activities, by the availability of better and cheaper inputs for agricultural activities and the increased demand for non-agricultural labor from new and more accessible existing markets. These changes imply income flows that are more diverse and perhaps less volatile promoting resilience in those that exit out of poverty. Second, improvements in the roads could also improve the access to existing health services, education services and other existing public infrastructure. This can increase the use of health facilities and school enrollment, increasing the human capital of a wide range of the population, specifically vulnerable sector (children, women and elderly).

PROGRAM PARTICIPANTS

Salvadorans in the Northern Zone in areas near rehabilitated infrastructure

Sampling

Study Population

The population being analyzed consists of the people living within a 30 minute radius of the NTH. This region (the Northern Zone) contains one-half of El Salvador's poorest municipalities and suffered more damage from the country's internal conflict during the 1980s than any other region. Economic and social indicators in the Northern Zone are currently worse than the national averages.

Sampling Procedure

The household survey for the connectivity impact evaluation interviewed 3,450 households at baseline. There was high attrition in the first two follow-up surveys (2010 and 2011), with few of the households lost in the follow-up being regained in 2011. In the 2012 round, the evaluator implemented a farther-reaching tracking of the baseline households and were able to recuperate more households, bringing the effective sample size in the 2012 survey to 3,065 households. For the endline survey in 2014, the evaluator will continue to track down the baseline households that are still missing and, to the extent possible, use methods that are robust to unbalanced panel data in the final analysis.

Questionnaires

Overview

Quantitative Household Survey: The baseline and endline survey questionnaire includes two sections – one (including questions about household income and agricultural productivity) that is answered by the male head of household who is interviewed by a male survey taker and one (including questions about household demographics, time allocation, and expenses) which is answered by a female in the household, i.e. spouse or female household head, who is interviewed by a female survey taker.

Quantitative and Qualitative Community Survey: The community survey was administered to key informants in communities where selected households live; each section of the survey was administered to the better-informed informant.

Data Collection

Data Collection Dates

Start	End	Cycle
2009	2010	Baseline
2010	2011	Follow-up 1
2011	2012	Follow-up 2
2012	2013	Follow-up 3
2013	2014	Follow-up 4
2015	2016	Endline

Data Collection Notes

The surveys took place from November to February of the indicated years.

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Data Collectors

Name	Abbreviation	Affiliation
Social Impact		
Dirección General de Estadísticas y Censos - El Salvador National Statistics	DIGESTYC	El Salvador National Statistics

Supervision

Interviewing was conducted by teams of interviewers. Each interviewing team comprised of 3-4 interviewers, and a supervisor, and a driver.

The role of the supervisor was to coordinate field data collection activities, including management of the field teams, supplies and equipment, finances, maps and listings, coordinate with local authorities concerning the survey plan and make arrangements for accommodation and travel. Additionally, a chief field supervisor assigned the work to the supervisors/interviewers, spot checked work, maintained field control documents, and sent completed questionnaires and progress reports to the central office.

The team 2 coordinators for data entry and quality control that were responsible for managing the headquarter team reviewing each questionnaire, checking for missed questions, skip errors, fields incorrectly completed, and checking for inconsistencies in the data.

For the follow-up surveys electronic devices were specifically programmed for the survey that automatically performed checks of the data in the field.

Data Processing

Data Editing

The evaluator will produce cleaned raw datasets that follows MCC's guidelines for public use data, including programming syntax used to clean the datasets for documentation purposes.

A full set of documentation for each survey will be provided. The raw data and the data used for the final analysis will be provided. A public use version of analysis data files will be provided. The publicly available version will be anonymized, and thus free of personal or geographic identifiers that would permit identification of individual respondents or their household members.

Data Appraisal

No content available